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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,063	12/19/2001	Hugh J. Abercrombie	217567US23 DIV	7959

22850 7590 03/31/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
WYSZOMIERSKI, GEORGE P	
ART UNIT	PAPER NUMBER
1742	

DATE MAILED: 03/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/021,063	ABERCROMBIE, HUGH J.	
	Examiner	Art Unit	
	George P Wyszomierski	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 65-81* is/are pending in the application.

4a) Of the above claim(s) *1,70,72,78 and 80* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *65-69,71,73-77,79 and 81* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/19/01*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Applicant's election with traverse of Group II, claims 65-81 and the noble metal species in the paper filed December 24, 2003 is acknowledged. The traversal is on the ground(s) that Applicant is not aware of any natural processes that could result in the product of the elected invention. This is not found persuasive because Applicant has not provided any proof of the above assertion, e.g. with reference to textbooks or scientific reasoning.

The requirement is still deemed proper and is therefore made FINAL. Claims 65-69, 71, 73-77, 79 and 81 will be examined to the extent that they read on the elected species, i.e. to the extent that they encompass materials based upon Au, Ag, or platinum group metals.

2. Claims 74-77, 79 and 81 are objected to as being dependent upon a non-elected claim. Clarification is required.

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 65-69, 71, 73-77, 79 and 81 are rejected under 35 U.S.C. 101 because the claims are drawn to naturally occurring products, which do not constitute statutory patentable subject matter. See *Ex parte Grayson* (51 USPQ 413). The present claims, drawn to isolated naturally occurring nanoclusters, would be analogous to claims drawn to gold obtained from a gold vein. The fact that the product as claimed may no longer be present in its natural

environment does not in any way detract from the fact that the gold (or, in the present case, the nanocluster) is a naturally occurring product.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 67 and 75 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims recite an isolated naturally occurring material which may comprise, in part, the elements technetium (Tc) or Promethium (Pm). The examiner is not aware of any disclosure in the art of those elements occurring naturally, in any form, anywhere in the world.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 65-69, 71 and 73 are rejected under 35 U.S.C. 102(b) as being anticipated by, or in the alternative under 35 U.S.C. 103(a) as being unpatentable over Reetz et al. (U.S. Patent 5,620,584).

Claims 65, 66 and 69 are rejected under 35 U.S.C. 102(b) as being anticipated by, or in the alternative under 35 U.S.C. 103(a) as being unpatentable over Singh et al. (U.S. Patent 5,770,126).

Claims 65-69 are rejected under 35 U.S.C. 102(b) as being anticipated by, or in the alternative under 35 U.S.C. 103(a) as being unpatentable over Martino et al. (U.S. Patent 5,814,370).

Claims 65, 67-69, 71 and 73 are rejected under 35 U.S.C. 102(e) as being anticipated by, or in the alternative under 35 U.S.C. 103(a) as being unpatentable over any of Johnson (U.S. Patent 6,131,836), Claus et al. (U.S. Patents 6,316,084 or 6,447,887), or Hagemeyer et al. (U.S. Patent 6,372,687).

The prior art discloses nanoclusters of silver, gold, or platinum group metals. The Reetz, Singh, and Martino patents all indicate that the clusters may be in an aqueous solution; see Reetz column 5, lines 10-12, Singh column 4, lines 41-42, or Martino column 1, line 62. The clusters of Reetz, Johnson, Claus, or Hagemeyer may comprise copper together with the silver,

gold, or platinum group metals; see Reetz example 63, the examples of Johnson, Claus '084 column 9, lines 45-66, Claus '887 column 6, lines 1-6, or Hagemeyer column 2, lines 23-35.

The prior art nanoclusters do not appear to be naturally occurring. However, no physical distinction is readily apparent between the nanoclusters as described in the prior art and those as defined in the instant claims and described in the present specification. Therefore, the examiner holds the claimed products and those of the prior art to be identical (in the sense of 35 USC 102).

Alternatively, the examiner holds that the claimed nanoclusters may differ in the manner in which they were made from the prior art nanoclusters. However, in the absence of any evidence of actual physical differences between the claimed materials and those of the prior art, the claimed invention is held to define at best obvious variants of the nanoclusters as disclosed by Reetz, Singh, Martino, Johnson, Claus, or Hagemeyer et al.

10. Claims 74-77, 79 and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reetz et al.

Claims 74 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Singh et al.

Claims 74-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martino et al.

Claims 74-77, 79 and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of Johnson, Claus et al. '084 or '887, or Hagemeyer et al.

The prior art discloses nanoclusters comprising gold, silver, or a platinum group metal and one or more other elements as defined in the instant claims as discussed in item no. 8 supra. The prior art does not specify that such materials were obtained by a process as

referred to in product-by-process terms in instant claim 74. However, it is well settled that a product-by-process claim defines a product, and that when the prior art discloses a product substantially the same as that being claimed, differing only in the manner by which it is made, the burden falls to applicant to show that any process steps associated therewith result in a product materially different from that disclosed in the prior art. See *In re Brown* (173 USPQ 685) and *In re Fessman* (180 USPQ 524). Because the nanoclusters as disclosed in the prior art appear to be physically the same as nanoclusters which fall within the scope of the claimed invention, a prima facie case of obviousness is established between the disclosures of Reetz, Singh, Martino, Johnson, Claus, or Hagemeyer et al. and the invention as presently claimed.

11. The remainder of the art cited on the attached PTO-892 and 1449 forms is of interest. This art is held to be no more relevant to the claimed invention than the art as applied in the rejections, supra.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. Effective October 1, 2003, all patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GEORGE WYSZOMIERSKI
PRIMARY EXAMINER

GPW
March 25, 2004